Installation Guide

DAS-T0804X/8X-SIG Tango Zone Expanders

Overview

Tango Zone Expanders (FIG. 1) are used to expand the number of zones in the system beyond the 4 or 8 that are available using the Tango Audio Controllers.

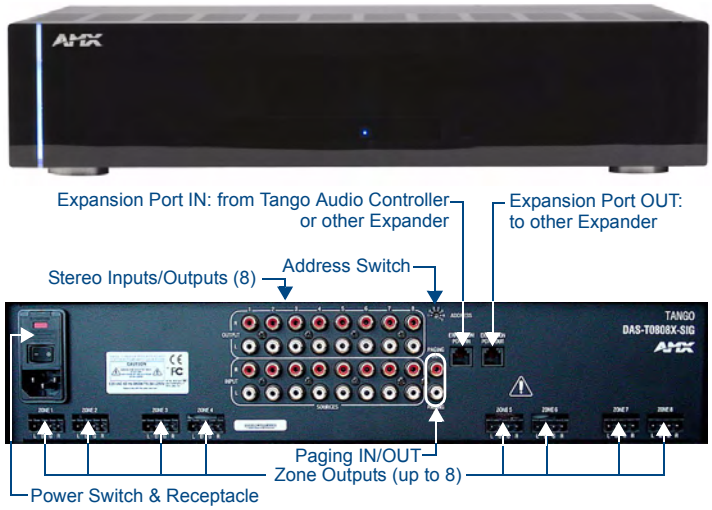


FIG. 1 Tango Zone Expanders (DAS-T0808X-SIG shown)

- Each Zone Expander has the capability of offering 4 or 8 zones per Expander.
- Up to 7 Zone Expanders may be used in the system, offering the ability to expand the system to 64 zones.

Product Specifications

Tango Zone Expanders - Product Specifications	
Models Available:	• **DAS-T0804X-SIG** (FG1103-11) Tango 4-Zone Expander • **DAS-T0808X-SIG** (FG1103-12) Tango 8-Zone Expander
Stereo Output:	40 Watts/CH Stereo amplifiers (20Hz - 20 KHz @ .1% THD)
Power:	960W max (Actual average usage = 300W)
Audio Inputs:	8 Stereo Inputs, 47K impedance
Audio Outputs:	8 Stereo Looping Outputs
Zones:	4 or 8 Independent Zones (4 X 2 Zone Modules).
Front Panel Components:	
Light Bar	Blue light bar indicates power status.
LEDs	Blue LEDs indicate active zones.
Rear Panel Components:	
• Power Switch/ Receptacle	Master power switch remains in ON position normally
• Paging In/Out Ports	RCA jacks to connect to Paging devices (any audio input can be used as a paging device). The Paging device connects to the Controller via the "Paging In" connector. The “Paging Out” connector is used to carry the page to Zone Expander(s).
• Expansion IN Port	RJ11 - From Mi Series Controller or other Zone Expander
• Expansion OUT Port	RJ11 - To another Zone Expander
• Address Switch	Sets the address of the Zone Expander and the zones within that Expander
• Zone Outputs	Connections for up to 8 zone outputs that connect to the keypads
Dimensions (HWD):	17” x 3.5” x 13.5” (43.18cm x 8.89cm x 34.29cm) (including feet and connectors)
Weight:	8 27.95 lbs. (12.68 kg)
Included Accessories:	• Power cable
Other AMX Equipment:	• Rack-Mount Installation Kit (FG1101-60)

Rack-Mounting

Tango units occupy two rack spaces in a standard 19" equipment rack. Rack mounting brackets are supplied with the optional Rack-Mount Installation Kit (FG1101-60).

***Note**: Exercise extreme care when lifting or moving Tango units within the rack to avoid injury. It is recommended that you seek the assistance of another person when rack mounting Tango units.*

1. Attach the rack mounting brackets to each side of the Tango unit using the four screws (10-32 Panhead Phillips - supplied with the Tango unit) for each bracket.

   ***Note**: To prevent injury the Tango unit must be securely attached to the rack in accordance with the installation instructions. ALWAYS use the special rack mount brackets supplied and high quality fixing screws to ensure the Tango unit is installed in the rack correctly.*
2. Place the Tango unit in the equipment rack and hold steady.
3. Secure the Tango unit in the rack using the mounting holes.

   ***Note**: DO NOT stand other units directly on top of the Tango unit when it is rack mounted, as this will place excessive strain on the mounting brackets.*

Ventilation

To ensure that the rack enclosure is adequately ventilated, there must be a minimum of 3" all around the Tango unit.

Sufficient airflow must be achieved (by convection or forced-air cooling) to satisfy the ventilation requirements of all the items of equipment installed within the rack.

Speaker Wire Technology (SWT)

Speaker Wire Technology (SWT) allows both data and audio signals to travel over the same four conductor wire. This remarkable technology removes the need for control wire since the control and audio signals are shared on the same wire. The reliability and simplicity of this system has been proven for years. AMX Distributed Audio is the only company that offers a “retrofit solution”, one which allows the replacement of volume controls with AMX Distributed Audio keypads and Controllers, giving full control over the sources. Additionally, the versatility of SWT also allows AMX Distributed Audio products to be connected where the control wire has been run separately from the speaker cable.

Cabling Instructions

***CAUTION**: Be sure to check for any wiring restrictions required by the electrical code in your area.*

This installation uses low voltage cabling similar to telephone and alarm wiring, and as such does not commonly have very many restrictions on their installation. However rules may vary in different regions.

Cable Type

The Tango Controller is cabled using standard 4-conductor speaker cable originating at the Tango Controller, passing through the Keypad, and terminating at the speaker location. AMX recommends using a bundled 4-conductor 16-gauge stranded copper wire in a single continuous run.

Connecting Sources (Audio Inputs/Outputs)

Up to 8 audio devices can be connected to the Tango Zone Expanders via the Sources INPUT and OUTPUT RCA connectors on the rear panel (see FIG. 1 on page 1). Industry standard RCA connectors provide line-level input and output connections for devices such as CD, DSS, MP3 players etc.

Each audio input has a corresponding buffered output used to connect the audio sources to additional Tango Controllers or to other devices that share the audio sources (FIG. 2).

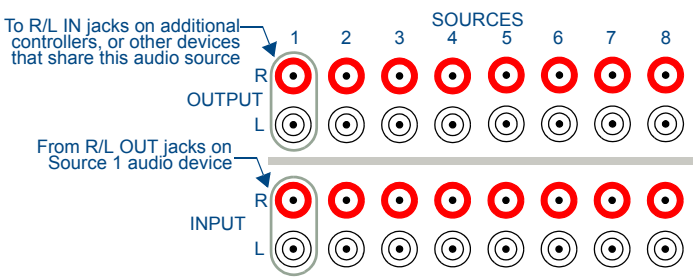


FIG. 2 Connecting Sources (Audio IN/OUT)

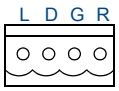
Connecting Zone Outputs

Tango Controllers can be accessed by SWT Metreau keypads (DAS-MET6SRC and DAS-MET-NUM) to provide basic transport control, source selection and volume up and down, as well as enhanced controls including direct access capability, favorite's source selection, zone grouping, alarm clock setting, and Keypad lockout.

***Note**: The Matrix Pushbutton (DAS-KP series) and LCD Keypads (DAS-KP-LCD series) are also supported by Tango Controllers.*

SWT Connectors

SWT cabling follows a specific pinout configuration that is labelled on the Tango Controller, Metreau keypads, and other Matrix devices, as shown in FIG. 3.



L = Left audio channel (+)
D = Data / Power (+)
G = Ground (-) - also provides return for L/R Audio
R = Right audio channel (+)

FIG. 3 SWT pinout configuration

Connecting Paging Inputs/Outputs

Paging Inputs are for Phone Systems or Communications Boxes. If the paging override is used, connect the paging Output connector on the Tango Controller to the Tango Zone Expander (FIG. 4):

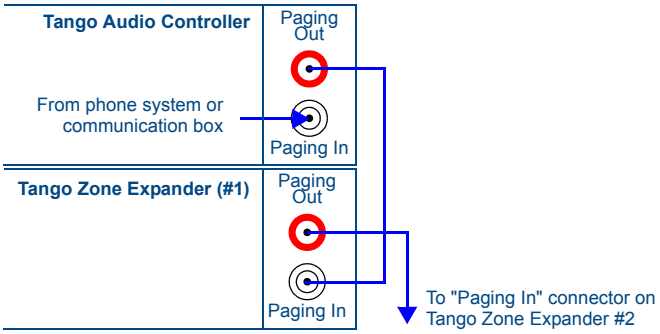


FIG. 4 Connecting Paging Input/Outputs

Connecting To Tango Audio Controllers

FIG. 5 provides a wiring diagram illustrating the connections between the Tango Audio Controller and multiple Tango Zone Expanders:

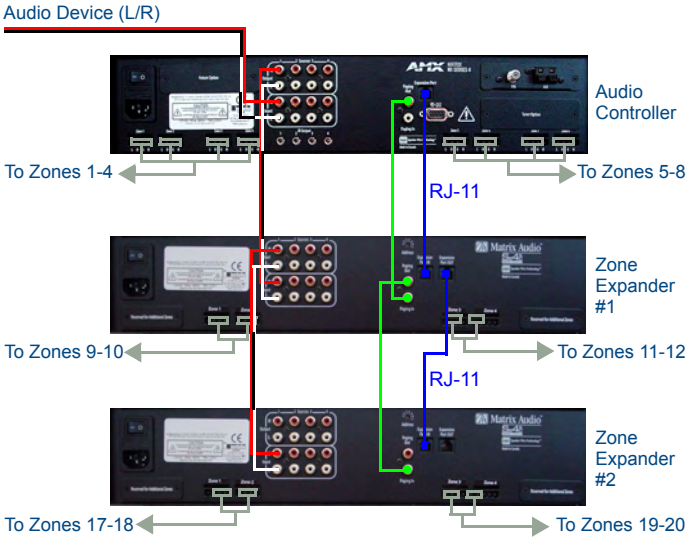


FIG. 5 Connecting the Tango Controller to Zone Expanders

1. Connect the RJ-11 jack labelled "*Expansion Out*" on the Tango Controller to the RJ-11 jack labelled "*Expansion Port In*" on the rear panel of the Zone Expander. This connection provides the Tango Controller with the ability to control the Zone Expander (see FIG. 5).
2. Set the Address switch on the rear panel of the Zone Expander to "1" if the Zone Expander services zones 9 – 16, set to "2" for zones 17 – 24 and so on until all seven Zone Expanders are utilized (see FIG. 5). Refer to the *Zone Expander Addressing* section on page 2 for further details.
3. Connect the source inputs. Patch each source from the source output on the Tango controller to the source inputs on the Zone Expander.

   ***Note**: Ensure the left and right source connections are properly matched and seated to the left and right terminals of the both the Tango Controller and the Zone Expander.*

   For example, Source 1 Output, on the Tango Controller to Source 1 Input on the Zone Expander).

   Continue this procedure until each source is connected.
4. Paging Inputs are for Phone Systems or Communications Boxes. If the paging override is used, connect the paging output loop from the Tango Controller to the Zone Expander (see FIG. 5).
5. Connect the keypads to the Tango Controller and Zone Expander(s). Following the same wiring code you used at each of the keypad locations, plug each SWT connector into the desired Zone Output connectors on the Tango Controller and Zone Expanders (see FIG. 5).
6. SWT Speakers connect to the Tango Controller via the SPEAKERS connector on the SWT keypads.
   - Alternatively, you can terminate the speakers directly to the back of the Controller. Speakers connected directly to the zone output must be common grounded.
   - The minimum impedance for each zone should never be less than 4 ohms.

   ***Note**: Installing more than 2 pairs of speakers on any Zone output is not recommended without installing an external amplifier.*
7. On the Main Controller, make the necessary NIC Port connections for the (optional) Network Interface Card and AM/FM Antennas.
8. Connect the power supply and power up the units.

Zone Expander Addressing

Use the Address switch on the rear panel of the Tango Zone Expanders (FIG. 6) to set the Address for each Expander, according to the values in the following table:

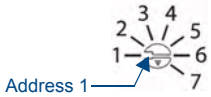


FIG. 6 Address switch

Zone Expander #	Address	DAS-T0804X-SIG(4 Zone)	DAS-T0808X-SIG (8 Zone)
1	1	Zones 9-12	Zones 9-16
2	2	Zones 17-20	Zones 17-24
3	3	Zones 25-28	Zones 25-32
4	4	Zones 33-36	Zones 33-40
5	5	Zones 41-44	Zones 41-48
6	6	Zones 49-52	Zones 49-56
7	7	Zones 57-60	Zones 57-64

Additional Documentation

Additional documentation for Distributed Audio products is available online at www.amx.com:

- For details on Tango Audio Controllers, refer to the *Tango Audio Controllers Operation/Reference Guide* and *Installation Guide*.
- For details on Metreau Keypads, refer to the *Metreau Keypads Operation/Reference Guide* and *Installation Guides*.
- For details on Tango Amplifiers, refer to the *Tango Amplifiers Installation Guide*.

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